

Application Number 10/057,043
Amendment dated May 23, 2006
Responsive to Office Action mailed February 23, 2006

REMARKS

This amendment is responsive to the Office Action dated February 23, 2006. Applicants have amended claims 1, 4, 7, 9, 27, 35, 40 and 53-55. Applicants have canceled claims 5, 51 and 52. Claims 18-26, 31-34 and 47-50 were previously withdrawn. Claims 1-4, 6-17, 27-30, 35-46 and 53-56 are pending upon entry of this amendment.

Claim Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1, 3, 4, 6, 8, 27, 28, 30, 35, 37-39, 41-44, 51-53 and 56 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,473,863 to Genty et al. (hereinafter "Genty") in view of U.S. Patent No. 6,353,593 to Chen et al. (hereinafter "Chen"). The Examiner also rejected claims 5, 7, 9-11, 14, 15, 40, 54 and 55 under 35 U.S.C. 103(a) as being unpatentable over Genty in view of Chen, and further in view of U.S. Patent No. 6,092,113 to Maeshima et al. (hereinafter "Maeshima"). In addition, the Examiner rejected claims 16, 17 and 29 under 35 U.S.C. 103(a) as being unpatentable over Genty in view of Chen, and further in view of U.S. Patent No. 6,880,090 to Shawcross, and rejected claims 2 and 36 under 35 U.S.C. 103(a) as being unpatentable over Genty in view of Chen, and further in view of U.S. Patent Application No. 2003/0016679 to Adams et al. (hereinafter "Adams"). Finally, the Examiner rejected claims 12, 13, 45 and 46 under 35 U.S.C. 103(a) as being unpatentable over Genty in view of Chen, and further in view of U.S. Patent Application No. 2002/0099854 to Jorgensen.

Applicants respectfully traverse the rejections to the extent such rejections may be considered applicable to the claims as amended. The applied references fail to disclose or suggest the invention defined by Applicants' claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Genty, Chen and Maeshima

Applicants have amended independent claims 1, 27, 35 and 53 to include the features of claims 5, 40 and 54. Independent claims 1, 27, 35 and 53 now recite reserving for a packet tunnel an amount of bandwidth within an access link, and canceling the reserved bandwidth for the packet tunnel after establishing a new packet tunnel upon detecting a network attack. That is,

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claims 1, 27, 35 and 53 specifically require that the new tunnel is established prior to canceling the bandwidth reserved for the original tunnel. In this way, Applicants' invention as claimed ensures that a new tunnel is established before canceling bandwidth for the original tunnel, i.e., shutting down the original tunnel, so as not to disrupt network performance.

In regards to the features of dependent claims 5, 40 and 54, the Examiner stated that Genty in view of Chen teaches canceling bandwidth in a packet tunnel upon detecting a network attack. The Examiner acknowledged that Genty in view of Chen fails to describe reserving an amount of bandwidth for a packet tunnel and a replacement packet tunnel. However, the Examiner asserted that Maeshima teaches reserving bandwidth for every IP tunnel on the network, which would thus inherently include the new tunnel. The Examiner further stated that it would have been obvious to a person of ordinary skill in the art to use the bandwidth reservation method taught by Maeshima with the system taught by Gentry in view of Chen to construct a tunnel which enables assurance of bandwidth.

Genty, Chen and Maeshima, either singularly or in combination, fail to teach or suggest canceling the reserved bandwidth for the packet tunnel after establishing a new packet tunnel upon detecting a network attack. Genty merely describes abandoning the original tunnel upon detecting a network attack, and later establishing a new tunnel. Genty does not describe canceling reserved bandwidth for the original tunnel after establishing the new tunnel. Chen fails to even mention reserving bandwidth or establishing a new tunnel upon detecting a network attack. Furthermore, Maeshima merely describes reserving bandwidth for every IP tunnel established in a network.

Even if the teachings of Genty in view of Chen were modified by the teachings of Maeshima as suggested by the Examiner, the combined references would not result in Applicants' invention as claimed. Maeshima describes reserving bandwidth for every IP tunnel on a network, and Genty describes abandoning an original VPN tunnel upon establishing a secondary VPN tunnel. Combining the references would result in discontinuing usage of original tunnels and, at some later time, establishing a new tunnel and reserving bandwidth in the new tunnel. This may cause disruption in performance of a network. The combined teachings would not result in Applicants' recited order of establishing a new packet tunnel, and then canceling

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reserved bandwidth for an original packet tunnel after establishing the new packet tunnel, as required by Applicants' independent claims 1, 27, 35 and 53.

In other words, Genty, Chen and Maeshima fail to teach, upon detecting a network attack, maintaining an original tunnel with the reserved bandwidth until a new tunnel is established. Applicants' invention as claimed requires a specific order of events when failing over to a newly established tunnel. The cited references do not teach or suggest any order when abandoning original tunnels and reserving bandwidth in new tunnels.

As an additional matter, Applicants would like to point out that Maeshima does not describe reserving for the packet tunnel an amount of bandwidth within an access link, as recited by Applicants' amended claims 1, 27, 35 and 53. Instead, Maeshima describes setting up a resource reservation protocol on an IP tunnel established between routers to assure an amount of bandwidth within the IP tunnel. Applicants' specification and dependent claim 4 defines an access link as coupling a destination network device of a tunnel to a public network. Applicants' specification further states that "the RSVP reservation is not an end-to-end reservation between the end points of the flow, as is typical for RSVP usage, but only applies to respective access links 7 connecting edge routers 10 to public network 6," (Page 6, ll. 4-6). Clearly, Maeshima fails to teach reserving bandwidth within an access link for either an original packet tunnel or a new packet tunnel established upon detecting a network attack in the original packet tunnel.

For at least these reasons, Applicants' independent claims 1, 27, 35 and 53 are in condition for allowance, as are Applicants' dependent claims 3, 4, 6-11, 14, 15, 28, 30, 37-44 and 54-56.

Genty, Chen and Shawcross

As described above, Genty, Chen and Maeshima do not teach or suggest reserving for a packet tunnel an amount of bandwidth within an access link, and canceling the reserved bandwidth for the packet tunnel after establishing a new packet tunnel upon detecting a network attack, as recited by Applicants' independent claims 1 and 27 from which claims 16, 17 and 29 depend. Shawcross fails to provide any teaching capable of overcoming the deficiencies of Genty, Chen and Maeshima.

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Genty, Chen and Adams

As described above, Genty, Chen and Maeshima do not teach or suggest reserving for a packet tunnel an amount of bandwidth within an access link, and canceling the reserved bandwidth for the packet tunnel after establishing a new packet tunnel upon detecting a network attack, as recited by Applicants' independent claims 1 and 35 from which claims 2 and 36 depend. Adams fails to provide any teaching capable of overcoming the deficiencies of Genty, Chen and Maeshima.

Genty, Chen and Jorgensen

As described above, Genty, Chen and Maeshima do not teach or suggest reserving for a packet tunnel an amount of bandwidth within an access link, and canceling the reserved bandwidth for the packet tunnel after establishing a new packet tunnel upon detecting a network attack, as recited by Applicants' independent claims 1 and 35 from which claims 12, 13, 45 and 46 depend. Jorgensen fails to provide any teaching capable of overcoming the deficiencies of Genty, Chen and Maeshima.

For at least these reasons, the Examiner has failed to establish a prima facie case for non-patentability of Applicants' claims 1-4, 6-17, 27-30, 35-46 and 53-56 under 35 U.S.C. 103(a). Withdrawal of this rejection is requested.

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CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

By:

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